



Properties of some elastomer types

			NR	SBR	EPDM	CR	NBR	HNBR	NBR-PVC	MVQ	FKM	IIR	CSM
Hardness Range	°Shore A	test method	35 ~ 95	40 ~ 90	30 ~ 85	40 ~ 90	40 ~ 95	45 ~ 95	40 ~ 95	25 ~ 80	50 - 95	25 ~ 80	45 ~ 85
physical properties													
density	g/cm ³	ISO 2781	0,93	0,94	0,86	1,25	1,00	1,00	1,10	1,25	1,85	0,93	1,25
glasstransiantemperature	°C		-70	-60	-55	-45	-45 ~ -20	-45 ~ -20	-20	-120	-20	-65	
temperature range	°C		-40 ~ 65	-30 ~ +70	-40 ~ +110	-20 ~ +100	-40 ~ +100	-40 ~ +150	-20 ~ +100	-60 ~ +200	-20 ~ +200	-30 ~ +90	-20 ~ +110
max. flashtemperature	°C		90	100	140	120	120	175	120	250	260	120	140
heat conduction coefficient	W/m.k		0,13	0,20	0,26	0,18	0,25	0,25	0,25	0,22	0,25	0,12	0,12
Mechanical properties													
tensile strength max.	MPa	ASTM D412	30	25	20	20	25	30	25	10	17	18	20
break elongation max.	%	ASTM D412	800	600	700	400	500	500	500	700	400	600	500
compression set 22h													
max @ 23°C	%	ASTM D395	10	30	20	10	15	15	15	20	35	30	30
min @ 70°C	%	ASTM D395	20		15	25	20	15	20	10	50		25
min @ 100°C	%	ASTM D395	55		35	75	40	17	40	10	50		80
min @ 150°C	%	ASTM D395			60			20		15	50		
tear resistance		ASTM D624	Excellent	Fair	Good	Good	Fair	Fair	Fair	Poor	Fair	Fair - Good	Good
abrasive resistance		DIN 53516	Excellent	Good	Good	Excellent	Good	Good	Good	Poor	Good	Fair - Good	Exellent
rebound elasticity		ASTM D1054	Excellent	Good	Good	Good	Fair	Fair	Fair	Fair	Poor	Poor	Good
Electrical properties													
dielectrical constant (1 kHz)			2,3 ~ 3,0	2,9	2,2 ~ 2,8	9,0	13,5	13,5	13,5	3,3 ~ 3,5	2,0	2,1 ~ 2,4	
Resistance													
ozone		ASTM D1171	Fair - Poor	Fair - Poor	Excellent	Good	Fair - Poor	Good	Good	Excellent	Excellent	Excellent	Excellent
sunlight			Poor	Fair	Very Good	Very Good	Poor	Good	Good	Excellent	Very Good	Very Good	Very Good
water (high temperature)		ASTM D1149	Fair	Fair	Excellent	Poor	Fair	Very Good	Fair	Poor	Very Good	Very Good	Fair
water (room temperature)		ASTM D1149	Good	Good	Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good
acid (dilute)		ASTM D1149	Fair - Good	Fair - Good	Excellent	Excellent	Fair	Fair	Fair	Good	Excellent	Excellent	Excellent
acid (concentrated)		ASTM D1149	Fair - Good	Fair - Good	Good	Good	Fair	Fair	Fair	Fair	Excellent	Good	Good
base		ASTM D1149	Fair	Fair	Good	Good	Fair	Good	Fair	Fair	Excellent	Good	Excellent
aliphatic hydrocarbons		ASTM D1149	Poor	Poor	Poor	Fair	Excellent	Excellent	Excellent	Fair - Poor	Excellent	Poor	Fair
aromatic hydrocarbons		ASTM D1149	Poor	Poor	Fair	Poor	Good	Good	Good	Fair - Poor	Excellent	Fair - Good	Poor
permeability to gases		DIN 53536	Fair	Fair	Fair - Poor	Fair	Good	Good	Good	Fair - Poor	Good	Excellent	Good
flame resistance			Poor	Poor	Poor	Good	Poor	Poor	Poor	Excellent	Excellent	Poor	Good

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